

Preparing Bomb Attacks by Exploiting Professional User Status

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Contents

I. Introduction	86
II. Regulated Explosives	89
A. The Legal Framework	89
B. The Acquisition of Explosives	91
C. Supply Chain Security Controls for Explosives	94
III. Regulated Explosives Precursors	96
A. The Legal Framework	96
B. The Acquisition of Restricted Explosives Precursors	98
C. Supply Chain Security Controls for Restricted Explosives Precursors	104
D. Exploiting Professional User Status	108
IV. Conclusion	112
V. Bibliography	115

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I. Introduction

The use of explosives to conduct crimes remains a topical issue. According to Europol's latest Terrorism Situation and Trend Report,¹ 58 terrorist attacks² were recorded in the European Union (EU) in 2024. Out of the 58 attacks, 34 were carried out successfully, with the majority – 20 attacks – occurring in Italy. 24 terrorist attacks were attributed to jihadist terrorism, which marks a significant increase from 14 attacks reported in 2023.³ Most of them were perpetrated by lone actors (20 out of 24). While arson was the dominating *modus operandi* (22 attacks), bombing was the second most common method used in 2024, with 11 attacks, 10 of which were executed with improvised explosive devices (IEDs),⁴ e.g., pipe bombs.

In Austria, the most prominent example of a perpetrator using IEDs is Franz Fuchs, who carried out a series of letter-bomb attacks in the 1990s.⁵ Today, Austria continues to face challenges related to the misuse of explosive materials. On August 18, 2023, two pipe bombs were placed beneath vehicles owned by Jehovah's Witnesses in the town of Leibnitz, Styria. They only partially detonated and caused no injuries.⁶ Later that year, on December 7, police arrested a 16-year-old in the city of Steyr, Upper Austria, suspected of planning an attack on a synagogue in Vienna. During the arrest, authorities seized hard drives containing ISIS propaganda, videos, and instructions for making weapons and bombs.⁷ In 2024, all scheduled Taylor Swift concerts in Vienna were cancelled just hours before they were set to begin, due to a planned

¹ Europol, 'European Union Terrorism Situation and Trend report 2025' (*TE-SAT 2025*, 16 July 2025) 13 <<https://www.europol.europa.eu/publication-events/main-reports/european-union-terrorism-situation-and-trend-report-2025-eu-te-sat>> accessed 10 August 2025.

² Following the definition of the cited report that is based on Directive (EU) 2017/541 of the European Parliament and of the Council of 15 March 2017 on combating terrorism and replacing Council Framework Decision 2002/475/JHA and amending Council Decision 2005/671/JHA [2017] OJ L 88/6.

³ Europol, 'European Union Terrorism Situation and Trend report 2024' (*TE-SAT 2024*, 16 April 2025) 11 <<https://www.europol.europa.eu/publication-events/main-reports/european-union-terrorism-situation-and-trend-report-2024-eu-te-sat>> accessed 29 April 2025.

⁴ *TE-SAT 2025*, 14.

⁵ Schliefssteiner, '„Ich bin ein österreichischer Patriot und bekenne mich als österreichischer Terrorist“ – Franz Fuchs, ein vergessener Vorläufer des modernen Rechtsterrorismus?' in Coester, Daun, Hartleb, Kopke and Leuschner (eds.), *Rechter Terrorismus: international – digital – analog* (Springer VS 2023) 377.

⁶ Bureau of Counterterrorism, Country Reports on Terrorism 2023: Austria (*US Department of State*, 2023) <<https://www.state.gov/reports/country-reports-on-terrorism-2023/austria>> accessed 29 April 2025.

⁷ *Idem*.

terrorist attack that was foiled on August 7 in Ternitz, Lower Austria, with the assistance of international intelligence services. According to the police, the main suspect, a 19-year-old, intended to carry out an attack using explosives and knives.⁸ The suspect had allegedly stolen chemicals from his former workplace; however, police only confirmed that chemical substances and technical devices found at his residence indicated concrete preparatory actions.⁹

IEDs may consist of commercially manufactured explosives or of homemade explosives (HMEs) produced from precursor substances.¹⁰ Commercially manufactured explosives include, for example, dynamite, Ammonium Nitrate Fuel Oil (ANFO) and emulsion explosives used in mining and construction, as well as military-grade explosives such as trinitrotoluene (TNT) or cyclotrimethylenetrinitramine (RDX).¹¹ Military-grade explosives are developed and controlled for defence purposes, whereas explosives for civil use are manufactured for legitimate industrial applications and supplied only to authorised users. Such authorised users are licenced under national law to acquire and use explosives for professional civil purposes, such as mining, demolition or related industrial activities, and are subject to strict regulatory oversight. Hence, such explosives are generally not available off the shelf due to their restricted availability, and perpetrators who use bombs to blast their targets instead often rely on homemade explosives. The manufacture of HMEs typically involves the use of explosives precursors to create the explosives per se. Explosives precursors can be found in benign everyday products, such as household cleaning products, but also in products intended for legitimate professional use, including industrial and agricultural use. When extracted from such products and chemically synthesised, these substances can be misused to enable the production of HMEs and are therefore classified as explosives precursors.¹² In order to address the risk of misuse of substances lawfully made available on the EU internal market for legitimate consumer or professional use,

⁸ TE-SAT 2025, 27; Wong, 'Third teen arrested over foiled attack at Swift concert' (*BBC News*, 9 August 2024) <<https://www.bbc.com/news/articles/c1k37dm9e0eo>> accessed 29 April 2025.

⁹ Wong, 'Third teen arrested over foiled attack at Swift concert' (*BBC News*, 9 August 2024) <<https://www.bbc.com/news/articles/c1k37dm9e0eo>> accessed 29 April 2025.

¹⁰ National Academies of Sciences, Engineering, and Medicine, *Reducing the Threat of Improvised Explosive Device Attacks by Restricting Access to Explosive Precursor Chemicals* (Washington, DC, National Academies Press, 2018) 9 ff.

¹¹ Akhavan, *The Chemistry of Explosives* (Cambridge, 2022) 1 ff.

¹² National Academies of Sciences, Engineering, and Medicine, *Reducing the Threat of Improvised Explosive Device Attacks by Restricting Access to Explosive Precursor Chemicals* (Washington, DC, 2018) 30 ff.

Regulation (EU) 2019/1148 (hereinafter “Explosives Precursors Regulation”)¹³ establishes controls on the ‘making available’, ‘introduction’, ‘possession’ and ‘use’ of substances or mixtures that could be misused for the illicit manufacture of explosives.

The regulation’s key objective is to limit the availability of such substances or mixtures to the general public. Where a substance presents a higher level of risk, the possession is restricted to professional users. In rare cases, consumers are authorised to possess them, provided there is a clear and legitimate need that cannot reasonably be met with non-restricted alternatives in order to pursue specific non-professional activities, such as fertilisers for private land management or fuel blends for model vehicles.¹⁴

With regard to the European Commission’s mandatory evaluation of the Explosives Precursors Regulation by 2 February 2026, this paper identifies areas where the current framework could be improved, in particular with respect to the verification of professional users at the point of sale. This paper argues that the current controls of the regulation are imbalanced and facilitate the *exploit of professional user status*, enabling individuals to obtain such substances under false pretences for the manufacture of HMEs. This argument is developed through a twofold comparative analysis of the control measures governing explosives and explosives precursors applicable to professional users and licenced members of the general public under the relevant legal framework:

- First, the regulatory framework imposes stringent controls on the acquisition of explosives, whereas access to explosives precursors remains comparatively less restricted.
- Second, while the acquisition of restricted explosives precursors by licenced consumers is subject to strict controls, access for professional users is comparatively less constrained.

The analysis of the regulation is based on the author’s contribution to the research project ‘ODYSSEUS’, which received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101021857.

¹³ Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors, amending Regulation (EC) No 1907/2006 and repealing Regulation (EU) No 98/2013 [2019] OJ L 186/1 (Explosives Precursors Regulation).

¹⁴ Commission Notice Guidelines for the implementation of Regulation (EU) 2019/1148 on the marketing and use of explosives precursors 2020/C 210/01 [2020] OJ C 210 (Commission Guidelines), Appendix 5.

The project developed prognostic, detection, and forensic tools aimed at improving the prevention, response to, and investigation of terrorist incidents involving homemade explosives within a comprehensive legal framework.¹⁵ In this context, the paper highlights the legal framework for the prevention of terrorist attacks involving HMEs.

II. Regulated Explosives

For the purposes of the comparative analysis, this section provides an overview of the legal framework governing explosives. It demonstrates that the framework establishes robust controls on the acquisition of explosives and their circulation throughout the supply chain, ensuring access is limited to authorised users.

A. The Legal Framework

As mentioned above in the introduction, explosives can be differentiated between military-grade explosives and explosives for civil use. Given that military-grade explosives circulate exclusively within defence-specific control regimes and are not lawfully placed on the internal market, the analysis in this section focuses on explosives for civil use and excludes military related issues, such as the possibility of theft from military supply depots or military compounds.

Explosives for civil use play a legitimate and essential role in a range of industrial and infrastructure-related activities within the EU. They are widely employed in sectors such as mining, quarrying, construction, demolition, tunnelling and other infrastructure works where controlled blasting remains a core technique in practice.¹⁶ Unlike military-grade explosives, explosives for civil use are manufactured and supplied exclusively for non-defence purposes and are intended to be used by authorised professional users under strictly regulated conditions. Those explosives are governed by Directive 2014/28/EU (hereinafter “Civil Use Explosives Directive”),¹⁷ which sets out specific rules on their safety, placement on the market,

¹⁵ European Commission, ‘PREVENTING, COUNTERING, AND INVESTIGATING TERRORIST ATTACKS THROUGH PROGNOSTIC, DETECTION, AND FORENSIC MECHANISMS FOR EXPLOSIVE PRECURSORS (ODYSSEUS)’ (CORDIS - EU research results) <<https://cordis.europa.eu/project/id/101021857>> accessed 16 March 2026.

¹⁶ Persson, Per-Anders, Holmberg and Lee, *Rock Blasting and Explosives Engineering* (Boca Raton, CRC Press, 1993); Cardu, Martinelli and Todaro, *Industrial Explosives and Their Applications for Rock Excavation* (Boca Raton, CRC Press/Balkema, 2024).

¹⁷ Directive 2014/28/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market and supervision of explosives for civil uses [2014] OJ L 96 (Civil Use Explosives Directive).

and supervision for civil use. The directive explicitly excludes explosives intended for armed forces or police.¹⁸

The Civil Use Explosives Directive defines ‘explosives’ as materials and articles that are classified as such under the United Nations Manual of Tests and Criteria and falling within Class 1 of those recommendations (hereinafter “United Nations Recommendations”).¹⁹ As those recommendations are subject to regular updates to reflect scientific and technical developments, references to them should be interpreted dynamically. However, the explosives covered by the Civil Use Explosives Directive do not fully correspond to the scope of the United Nations Recommendations, as certain articles classified under the latter are identified as pyrotechnic articles or ammunition and therefore fall, in whole or in part, outside the scope of the Directive.²⁰ Pyrotechnic articles are regulated separately under Directive 2013/29/EU²¹ while, in the case of ammunition, only Articles 12 to 14 of the Civil Use Explosives Directive apply.²² Nevertheless, Member States can always designate substances not governed by the Civil Use Explosives Directive as explosives under national laws.²³

The Civil Use Explosives Directive requires that Member States do not prohibit, restrict or hinder the ‘making available on the market’ of explosives that comply with the requirements of the directive.²⁴ In doing so, it ensures the free movement of such explosives within the EU, while Member States are required to implement the necessary measures to ensure that explosives may be made available on the market only if they comply with the requirements of the directive.²⁵ In this context, ‘making available on the market’ means any supply of an explosive for distribution or use on the Union market as part of a commercial activity, whether for payment or free of charge.²⁶ While the explosives themselves need to be in conformity with the essential

¹⁸ Civil Use Explosives Directive, Article 1(2)(a).

¹⁹ Civil Use Explosives Directive, Article 2(1).

²⁰ Civil Use Explosives Directive, Article 1(2) and Recital 2.

²¹ Directive 2013/29/EU of the European Parliament and of the Council of 12 June 2013 on the harmonisation of the laws of the Member States relating to the making available on the market of pyrotechnic articles (recast) [2013] OJ L 178/27 (Pyrotechnic Articles Directive).

²² Civil Use Explosives Directive, Article 1(2).

²³ Civil Use Explosives Directive, Article 1(3).

²⁴ Civil Use Explosives Directive, Article 3.

²⁵ Civil Use Explosives Directive, Article 4.

²⁶ Civil Use Explosives Directive, Article 2(7).

safety requirements set out in Annex II of the Civil Use Explosives Directive by undergoing the conformity assessment procedures,²⁷ each Member State is obliged to put in place a licencing system for consignors and consignees of explosives.

B. The Acquisition of Explosives

The acquisition of explosives for civil use is subject to the transfer procedure under Article 11 of the Civil Use Explosives Directive. Article 11 governs any transfer of explosives within the Union, except physical movement within ‘one and the same site’.²⁸ The notion of the ‘same site’ needs to be interpreted as narrowly as possible. The German language version of the Civil Use Explosives Directive refers to ‘Ortsveränderungen innerhalb einer Betriebsstätte’, which translates to movements within the *same facility*. Moreover, Recital 19 of the Directive refers to ‘production site’ in the context of the identification and the traceability of an explosive. Therefore, the use of the word ‘site’ in Article 2(6) needs to be understood as referring to any type of ‘site’ to which the transfer procedure applies the moment the explosive leaves the manufacturer’s production site. Accordingly, the transfer procedure applies again each time the explosive moves from a distributor’s storage site, and so on throughout the supply chain.

The transfer procedure requires that the consignee obtain prior authorisation from the competent authority of the Member State in which the consignee is established. The competent authority must verify that the consignee is legally authorised to acquire explosives and holds the necessary licences or authorisations.²⁹ In addition to the verification of the consignee’s formal compliance, the competent authority of the Member State of the consignee examines the conditions under which the transfer may take place, with particular regard to security requirements. Where those requirements are satisfied, approval for the transfer may be granted. Where the competent authority of the Member State of the consignee approves a transfer of explosives, it issues an approval document to the consignee. This document must contain, in particular, the following information:

- The economic operators involved, including their names and addresses;
- The quantity of explosives, specifying the number and amount being transferred;

²⁷ Civil Use Explosives Directive, Chapter 4.

²⁸ Civil Use Explosives Directive, Article 2(6).

²⁹ Civil Use Explosives Directive, Article 11(2).

- A full description of the explosives, including the applicable means of identification and the United Nations identification number;
- Market compliance information, where the explosives are to be placed on the market, demonstrating compliance with the relevant conditions;
- Details of the transfer, including the means of transport and the planned itinerary;
- The expected dates of departure and arrival;
- Border information, where necessary, indicating the precise points of entry into and exit from Member States.³⁰

The approval document must accompany the explosives until they arrive at their stated destination. A copy of the document must be retained by the consignee and made available, upon request, for inspection by the competent authority of the Member State of the consignee.³¹ Where a competent authority considers that explosives may be transferred within its territory without the prior provision of all information normally required under the transfer procedure, it may grant an approval for a fixed period, which may be suspended or withdrawn at any time on the basis of a reasoned justification.³² This flexibility takes into account administrative practicality in accommodating routine or low-risk transfers within a controlled territorial context (e.g., between known and authorised operators along previously assessed transport routes), while preserving the ability of competent authorities to exercise ongoing oversight and to intervene where safety or security concerns arise.

In the case of transit through the territory of other Member States, the economic operator responsible for the transfer is required to notify the competent authorities of the transit Member State of any movement of explosives through its territory and to obtain that Member State's prior approval. The competent authorities of those Member States likewise examine and approve the particulars concerning the transfer.³³ In this context, the responsible economic operator may be the consignor, the consignee, or the transport operator. In addition to those routine checks carried out by the Member State of departure, consignees and other economic operators

³⁰ Civil Use Explosives Directive, Article 11(4) and (5).

³¹ Civil Use Explosives Directive, Article 11(4).

³² Civil Use Explosives Directive, Article 11(6).

³³ Civil Use Explosives Directive, Article 11(2) and (5).

involved in the transfer must provide all relevant information concerning the transfer of explosives to any of the competent authorities upon their request.³⁴

In Austria, the Civil Use Explosives Directive's requirements were transposed into national law by amending the Sprengmittelgesetz³⁵ (hereinafter "Austrian Explosives Act") and the Bergbau-Sprengmittellagerungsverordnung³⁶ (hereinafter "Austrian Mining Explosives Storage Ordinance"). § 28 of the Austrian Explosives Act stipulates that explosives may only be given to persons who are authorised to possess them. The authorization for possession depends on an official permit (§ 22), which is granted by the authority issuing an explosives licence. Persons under the age of 21 are absolutely prohibited from purchasing and possessing explosives according to § 4(1) and therefore cannot be issued with an explosives licence.

According to § 24 of the Austrian Explosives Act, the authority will issue a person above the age limit with an explosives licence only on their request, for a limited period of up to 5 years.³⁷ This is subject to the applicant being able to demonstrate a legitimate interest in carrying out blasting work, having taken precautions for safe storage, being reliable in terms of § 5 and providing proof of knowledge of how to carry out blasting work. This latter requirement is fulfilled by presenting a certificate from an educational institution eligible for this purpose.³⁸

Since § 28 of the Austrian Explosives Act requires that explosives only be supplied to persons who are authorised to possess them, any economic operator (supplier) needs to request that the potential possessor present their explosives licence. The supplier must note on the consignee's explosives licence the name (company name), type, designation, quantity of explosives provided, and the date of the transfer.³⁹

³⁴ Civil Use Explosives Directive, Article 11(7).

³⁵ SprG 2010 (Austrian Explosives Act) as amended by SprG-Novelle 2015, Austrian Federal OJ I 2015/136; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number; the transposition lead to the amendment of §§ 1, 3, 10, 11, 21, 29, 30, 33, 36, 44, 47, 48, 49 and to the addition of §§ 10a, 12a, 12b, 12c, 12d, 12e, 12f, 12g, 12h, 12i, 42a, 42b, 42c, 42d, and 42e;

³⁶ B-SprLV as amended by federal ordinance, Austrian Federal OJ II 2022/208; all Austrian federal ordinances can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

³⁷ Austrian Explosives Act, § 24(3).

³⁸ § 24(2) lit 2 of the Austrian Explosives Act in conjunction with §§ 62(f) ASchG (Austrian Employee Protection Act) as amended by Grace-Period – Gesetz, Austrian Federal OJ I 2024/56; all Austrian federal ordinances can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

³⁹ Austrian Explosives Act, § 28(2).

Economic operators⁴⁰ dealing with explosives are required to be in possession of a licence or authorisation that entitles them to engage in the manufacture, storage, use, import, export, transfer or trade of explosives.⁴¹ Therefore, in Austria, the trade in explosives is only permitted with a special authorisation from the authorities and the authorisation is granted by issuing the trading licence.⁴²

C. Supply Chain Security Controls for Explosives

Economic operators are required to apply a uniform system for the unique identification and traceability of explosives, considering their size, shape, and design. This identification and traceability system operates through the collection and storage of data, including by electronic means where appropriate, to ensure effective traceability.⁴³ This includes the placement of a unique identifier on the explosive and/or its packaging, allowing access to the relevant data. The data covers the identity of the explosive, its location while in the possession of economic operators, and the identity of those operators.⁴⁴ The data must be regularly tested and protected against accidental or malicious damage or destruction. The data must be retained for 10 years after the transaction or, where applicable, for 10 years after the use or disposal of the explosives, even if the economic operator has ceased trading. The data must be made immediately available to the competent authorities upon request.⁴⁵

The ‘practical arrangements for the operation of the system’⁴⁶ are set out in the Commission Directive 2008/43/EC⁴⁷ (hereinafter “Civil Use Explosives Traceability Directive”), which had established the system for the identification and traceability of

⁴⁰ Meaning the manufacturer, the authorised representative, the importer, the distributor and any natural or legal person who engages in the storage, use, transfer, import, export or trade of explosives, Civil Use Explosives Directive, Article 2(13).

⁴¹ Civil Use Explosives Directive, Article 16.

⁴² Austrian Explosives Act, § 19(1).

⁴³ Civil Use Explosives Directive, Article 15(2).

⁴⁴ Civil Use Explosives Directive, Article 15(2).

⁴⁵ Civil Use Explosives Directive, Article 15(3).

⁴⁶ Civil Use Explosives Directive, Article 15(4).

⁴⁷ Commission Directive 2008/43/EC of 4 April 2008 setting up, pursuant to Council Directive 93/15/EEC, a system for the identification and traceability of explosives for civil uses [2008] OJ L 94 (Civil Use Explosives Traceability Directive), as amended by Commission Directive 2012/4/EU of 22 February 2012 [2012] OJ L 50.

explosives for civil use under Council Directive 93/15/EEC,⁴⁸ which preceded the Civil Use Explosives Directive.⁴⁹ According to this system, there is no central EU database, but each economic operator stores traceability data relating to the explosives it handles. Those technical rules include the following obligations and apply to both digital and non-digital records:

- Keeping a record of all identifications of explosives, together with all pertinent information, including the type of explosive and the company or person to whose custody it has been given;
- Recording the location of each explosive while the explosive is in their possession or custody until it is either transferred to another undertaking or used;
- Testing their data-collection system at regular intervals in order to ensure its effectiveness and the quality of the data recorded;
- Keeping and maintaining the data collected, including the unique identifications, for a period of 10 years after the delivery or whenever known after the end of the life cycle of the explosive, even if undertakings have ceased trading;
- Protecting the data collected against accidental or malicious damage or destruction;
- Providing the competent authorities, upon request, with information concerning the origin and location of each explosive during its life cycle and throughout the supply chain;
- Providing the responsible authorities of the Member States with the name and contact details of a person able to provide the information referred to above outside normal business hours.⁵⁰

Economic operators are exempt from applying the identification and traceability system where, due to the characteristics of the explosive, a unique identifier is unnecessary because of its low hazard and security risk. The application of this exemption is based on an assessment by the economic operator, subject to verification by the competent authorities. In any case, the identification and

⁴⁸ Council Directive 93/15/EEC of 5 April 1993 on the harmonization of the provisions relating to the placing on the market and supervision of explosives for civil uses [1993] OJ L 121.

⁴⁹ The terrorist attacks in Madrid in 2004 prompted the European Union to take action to improve the detection of the origin of explosives; for more details to the Austrian implementation see Gartner, Löff and Londer, *Sprengmittelgesetz 2010: Praxiskommentar*, 3rd edn., Stand: 1 July 2016 (Linz, proLIBRIS.at, 2016) 45 ff.

⁵⁰ Civil Use Explosives Traceability Directive, Article 14.

traceability system does not apply to explosives that are transported and delivered unpackaged or in pump trucks for direct unloading into blast holes, nor to explosives manufactured at blasting sites and loaded immediately after production (in situ production).⁵¹

However, for explosives not recorded in the identification and traceability system, economic operators must, upon request, be able to identify the economic operators from whom they have obtained an explosive and those to whom they have supplied it. That information must be made available to market surveillance authorities⁵² for a period of 10 years after the explosive has been supplied or received.⁵³

III. Regulated Explosives Precursors

This section provides an overview of the legal framework governing explosives precursors. It demonstrates that the framework establishes imbalanced controls on the acquisition of explosives precursors and their circulation throughout the supply chain, thereby failing to ensure that access is limited to authorised users.

A. The Legal Framework

As mentioned above in the introduction, explosives precursors are chemical substances that occur in a wide range of legitimate consumer and professional products, including household cleaning agents, fertilisers, and industrial chemicals, but which may be misused, if extracted and cooked or blended to manufacture explosives.⁵⁴ Ammonium nitrate (AN) is a paradigmatic example of a dual-use substance, as it is widely used for legitimate purposes, including nitrogen-based fertilisers and gas generators in airbags, while also serving as a component of granulated or emulsified explosives.⁵⁵ In recent history, one of the largest single ammonium nitrate explosions occurred on 4 August 2020, when approximately

⁵¹ Civil Use Explosives Directive, Article 15(1).

⁵² In Austria, the market surveillance authorities are the state police directorates ('Landespolizeidirektionen') and district administrative authorities ('Bezirksverwaltungsbehörden') under delegation of the Federal Minister of Interior, see Austrian Explosives Act, § 44(1)(12) and § 49.

⁵³ Civil Use Explosives Directive, Article 10.

⁵⁴ National Academies of Sciences, Engineering, and Medicine, *Reducing the Threat of Improvised Explosive Device Attacks by Restricting Access to Explosive Precursor Chemicals* (Washington, DC, 2018) 26 f.

⁵⁵ Klapötke, 'Ammoniumnitrat - Dünger, Sprengstoff, Gasgenerator' (2021) *Chemie in unserer Zeit* 55(4) 217 (256).

2,750 tonnes of AN stored at the Port of Beirut in Lebanon detonated, causing devastating damage to the surrounding urban area and resulting in more than 6,500 casualties.⁵⁶ Although the incident was accidental, it highlights the destructive potential of explosives precursors and the necessity of effective controls to prevent their misuse.

Unlike the EU legislation on explosives, which is governed by a directive requiring transposition into national law by the Member States, the EU legislator employs a regulation to govern explosives precursors with direct effect among the Member States. The Explosives Precursors Regulation regulates specific substances to prevent the illicit manufacture of explosives. Its objective is to limit the availability of such substances to the public and to ensure the appropriate reporting of suspicious transactions throughout the supply chain. Hence, this regulation is foremost applicable to economic operators and online marketplaces who sell products that are or contain explosives precursors.

The substances concerned are regulated according to their degree of hazard, their volume of trade and whether a safe concentration threshold can be set to ensure legitimate use while reducing their potential for illicit explosive manufacturing.⁵⁷ The regulation distinguishes between ‘restricted explosives precursors’ and ‘reportable explosives precursors’. The first are listed in Annex 1 of the regulation and the latter in Annex 2. Substances listed in Annex 1 are generally restricted for the general public⁵⁸ unless their concentration remains below the limits specified therein, whereas substances listed in Annex 2 are not restricted. However, despite the name of Annex 2, it does not mean that only the substances listed within it are subject to reporting requirements. In fact, all explosives precursors regulated by the Explosives Precursors Regulation require reporting by the possessor when they disappear in significant amounts or have been stolen.⁵⁹ I.e., in terms of set theory, both annexes combine a total quantity of reportable explosives precursors, which implies that ‘restricted explosives precursors’ are a subset of ‘reportable explosives precursors’. Therefore, the author recommends that the EU legislator revises the designation of Annexes 1 and 2. A simple amendment with immediate clarifying effect would be the

⁵⁶ Kim and Pasyanos, ‘Yield Estimation of the August 2020 Beirut Explosion by Using Physics-Based Propagation Simulations of Regional Infrasound’ (2022) *Geophysical Research Letters* 49 1.

⁵⁷ Explosives Precursors Regulation, Recital 5.

⁵⁸ ‘Member of the general public’ means any natural or legal person who is acting for purposes not connected with that person’s trade, business, or profession, see Explosives Precursors Regulation, Article 3(8).

⁵⁹ Explosives Precursors Regulation, Article 9(5) and (6) as well as Annex 1 and Annex 2.

renaming of Annex 2 from ‘reportable explosives precursors’ to *unrestricted explosives precursors*. The differentiation between *restricted* and *unrestricted* explosives precursors creates clarity at first sight and does not change the fact that substances from both annexes are regulated and are subject to reporting.⁶⁰ This paper focuses on the regulation of the restricted explosives precursors listed in Annex 1.

B. The Acquisition of Restricted Explosives Precursors

Members of the general public, meaning any natural or legal person who is acting for purposes not connected with its trade, business, or profession, are not permitted to acquire, introduce, possess or use certain explosives precursors at concentrations above certain limit values, expressed as a percentage by weight by weight (w/w).⁶¹ For example, the limit value of 12% w/w for hydrogen peroxide (H₂O₂)⁶² indicates that 12% of the total mass of the solution is hydrogen peroxide, with the remaining 88% being the solvent, usually water (H₂O).⁶³ Therefore, anyone can buy products that contain hydrogen peroxide in diluted forms up to 12% w/w (see Table 1), such as mouthwashes, sanitizers or disinfectants.⁶⁴

Name of the substance	Limit value	Upper limit value
Nitric acid	3 % w/w	10 % w/w
Hydrogen peroxide	12 % w/w	35 % w/w
Sulphuric acid	15 % w/w	40 % w/w
Nitromethane	16 % w/w	100 % w/w
Ammonium nitrate	16 % w/w of nitrogen in relation to ammonium nitrate	No licensing permitted

⁶⁰ Explosives Precursors Regulation, Article 3(13).

⁶¹ Explosives Precursors Regulation, Article 5(1) and Recital 6.

⁶² Chemical Abstracts Service Registry Number 7722-84-1; all CAS RN can be accessed via <https://commonchemistry.cas.org> with their CAS RN or chemical compound name.

⁶³ Explosives Precursors Regulation, Annex 1 column 2.

⁶⁴ Hossainian, Slot, Afennich and Van der Weijden, ‘The Effects of Hydrogen Peroxide Mouthwashes on the Prevention of Plaque and Gingival Inflammation: A Systematic Review’ (2011) *International Journal of Dental Hygiene* 9 171; Choi, Baek, Yoon, Choi, Kang and Lee, ‘Efficacy of Aerosolized Hydrogen Peroxide-Based Sanitizer on the Reduction of Pathogenic Bacteria on a Stainless Steel Surface’ (2012) *Food Control* 27 57.

Potassium chlorate	40 % w/w	No licensing permitted
Potassium perchlorate	40 % w/w	No licensing permitted
Sodium chlorate	40 % w/w	No licensing permitted
Sodium perchlorate	40 % w/w	No licensing permitted

Table 1: Limit values of Annex 1 of the Explosives Precursors Regulation

The acquisition of restricted explosives precursors above the applicable limit values is reserved to ‘professional users’ and – to some extent – to licenced members of the general public (hereinafter “licenced users”). Only the latter require a licence, in contrast to professional users. This is where the core issue arises, and the requirements applicable to both groups are therefore examined below.

1. Licenced Users

Members of the general public are allowed to acquire certain restricted explosives precursors beyond the limit value in a few Member States of the European Union, which made use of the opening clause included in Article 5(3) of the regulation. This exception is based on established licencing regimes that rely on upper limit values. A Member State may maintain or establish a licencing regime allowing certain restricted explosives precursors to be made available to, or to be introduced, possessed or used by members of the general public at concentrations beyond the limit value but not higher than the corresponding upper limit values set out in column 3 of the table in Annex I.⁶⁵ Most of the restricted explosives precursors are not subject to licencing. Nonetheless, some restricted explosives precursors – nitric acid (HNO₃),⁶⁶ sulphuric acid (H₂SO₄),⁶⁷ hydrogen peroxide (H₂O₂)⁶⁸ and nitromethane (CH₃NO₂)⁶⁹ – are subject to upper concentration limits. Accordingly, where a licencing regime is in place in the relevant Member State, licenced users may purchase these restricted explosives precursors, but only within the applicable upper limit values.

The majority of Member States do not make use of this option. Only eight Member States have a licence regime in place, and the scope of permitted substances varies between them: Austria, Denmark, Finland, the Netherlands, Spain and Sweden issue

⁶⁵ Explosives Precursors Regulation, Article 5(3).

⁶⁶ Chemical Abstracts Service Registry Number 7697-37-2.

⁶⁷ Chemical Abstracts Service Registry Number 7664-93-9.

⁶⁸ Chemical Abstracts Service Registry Number 7722-84-1.

⁶⁹ Chemical Abstracts Service Registry Number 75-52-5.

licences to members of the general public for all four of the restricted explosives precursors just mentioned above. Ireland's licences are more restrictive as they are only available for nitric acid (HNO_3) and hydrogen peroxide (H_2O_2), and Portugal only offers licences for nitromethane (CH_3NO_2).⁷⁰

Such licences which allow access to quantities up to the applicable upper limit values must be issued by the competent authority of the Member State in which the restricted explosives precursor is intended to be acquired, introduced, possessed, or used.⁷¹ Any member of the general public can apply (hereinafter "applicant"), but the applicant needs a legitimate interest to be issued a licence. When assessing an application for a licence, the competent authority must take into account 'all relevant circumstances', including the applicant's demonstrable need for use, the legitimacy of the intended use, alternative substances with a similar effect, the applicant's background (including previous criminal convictions anywhere within the EU), and the proposed storage arrangements to ensure that the restricted explosives precursor is securely stored.⁷² Once issued, a licence must comply with the format as defined in Annex 3 to the Explosives Precursors Regulation. The competent authority is entitled to limit the validity of the licence through permitting single or multiple use. In any event, the period of validity of the licence may not exceed three years.⁷³ If the competent authority has reasonable grounds to believe that the conditions under which the licence was issued are no longer fulfilled, it may suspend or revoke the licence.⁷⁴

In Austria, the competent authorities for the issuance of a licence are the district administrative authorities ("Bezirksverwaltungsbehörden") under delegation of the Federal Minister for Innovation, Mobility, and Infrastructure.⁷⁵ In order to obtain a licence for a restricted explosives precursor in accordance with Article 6 of the Explosives Precursors Regulation, a natural person who has a legitimate interest in

⁷⁰ Migration and Home Affairs, Legislation on chemicals used in Home Made Explosives (*European Commission*, 1 May 2024) <https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives_en> accessed 17 April 2025.

⁷¹ Explosives Precursors Regulation, Articles 5(3) and 6(7).

⁷² Explosives Precursors Regulation, Article 6(1).

⁷³ Explosives Precursors Regulation, Article 6(3).

⁷⁴ Explosives Precursors Regulation, Article 6(5).

⁷⁵ § 10(1)(2) ChemG 1996 (Chemicals Act 1996) as amended by federal law, Austrian Federal OJ I 2023/186; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title.

acquiring, transferring, possessing, or using a restricted precursor for explosives must submit an application to the locally competent district administrative authority in person, presenting official photo identification and providing the following information:

- Name
- Gender
- Previous names (where applicable)
- Date of birth
- Residential address
- Nationality
- In the case of a single acquisition, transport, possession, and use of a restricted explosives precursor:
 - Name of the restricted explosives precursor
 - Maximum quantity
 - Maximum concentration
 - Intended use and justification demonstrating a legitimate need
- In the case of multiple acquisitions, transfers, possession, and use of a restricted explosives precursor:
 - Designation of the restricted explosives precursor
 - Maximum quantity to be held by the applicant at any given time
 - Maximum concentration
 - Intended use and justification demonstrating a legitimate need
- Storage arrangements, including the storage location and details of how access by third parties will be prevented
- Place of use, where different from the residential address⁷⁶

Moreover, the applicant must attach a conclusive expert opinion from a generally sworn and court-certified expert in chemistry, a state-authorized and sworn consulting engineer, or a civil engineer specialized in chemistry or technical chemistry, which proves that:

1. There is a demonstrable need for the requested use of the restricted explosives precursor.
2. The requested quantity is realistic in relation to the requested use.
3. The restricted explosives precursor is not suitable for the requested use in lower concentrations.

⁷⁶ Chemicals Act 1996, § 10(3).

4. The restricted explosives precursor cannot be replaced by other chemicals with a similar effect or by other processes for the requested use.⁷⁷

The district administrative authority verifies whether the applicant has reached the age of 18, is reliable within the meaning of § 11 Chemicals Act 1996, intends to use the restricted explosives precursor for a lawful purpose and whether the expert opinion has been obtained. In addition, the authority assesses whether the proposed storage arrangements ensure the safe storage of the restricted explosives precursor, in particular that it is securely locked and inaccessible to third parties.⁷⁸

Pursuant to § 11 of the Chemicals Act 1996, an applicant is considered reliable where there are facts justifying the assumption that the applicant will not misuse or negligently use the restricted explosives precursor applied for and will handle it with due care. Therefore, the competent authority must positively establish the applicant's reliability on the basis of supporting facts and not merely confirm that no facts exist which would speak against the applicant's reliability. Applicants are not considered reliable in any case if applicants have been convicted by a court of a criminal offence punishable by more than three months' imprisonment or a fine exceeding 180 daily rates, provided that the conviction has not yet been expunged. This also applies where a comparable offence has been committed abroad.

Given the diligence required in the administrative process, the bar is set high and the examination of an application may be time-consuming, particularly because the competent authority must consider all previous criminal convictions of the applicant across the Union, meaning any final decision of a criminal court against a natural person in respect of a criminal offence.⁷⁹ The decentralised European Criminal Records Information System⁸⁰ (ECRIS) facilitates such queries, and the competent authorities are obliged to exercise this option,⁸¹ but ECRIS allows authorities only to

⁷⁷ Chemicals Act 1996, § 10(4).

⁷⁸ Chemicals Act 1996, § 10(5).

⁷⁹ Council Framework Decision 2009/315/JHA of 26 February 2009 on the organisation and content of the exchange of information extracted from the criminal record between Member States [2009] OJ L 93 (Council Framework Decision), Article 2(a).

⁸⁰ Directive (EU) 2019/884 of the European Parliament and of the Council of 17 April 2019 amending Council Framework Decision 2009/315/JHA, as regards the exchange of information on third-country nationals and as regards the European Criminal Records Information System (ECRIS), and replacing Council Decision 2009/316/JHA [2019] OJ L 151 (ECRIS Directive), Article 11(a).

⁸¹ Explosives Precursors Regulation, Article 6(9).

obtain information on EU citizens.⁸² The development of the ECRIS-TCL,⁸³ a centralised system for the identification of Member States holding conviction information on third-country nationals and stateless persons, was expected to be operational in 2022⁸⁴ but is still in development.⁸⁵ Hence, obtaining conviction information about non-EU citizens requires contacting the competent authorities of each Member States individually. This raises the question of whether, in practice, all competent authorities from 26 other Member States are indeed being contacted when a non-EU citizen applies for a licence in one of the eight Member States. Further, this highlights that legal instruments, such as the Explosives Precursors Regulation, depend on reliable information systems. While the centralised approach of ECRIS-TCL is expected to be efficient (once it is operational), the decentralised approach of ECRIS has the downside that responses from the competent authorities of all the other Member States to requests on the convictions may take time, slowing down the application process for a licence. Legally, the maximum response time is up to 10 working days from the date the request was received.⁸⁶ While Member States may recognise licences issued by other Member States, Austria has chosen not to do so.⁸⁷

2. Professional Users

As mentioned above, the other group allowed to acquire restricted explosives precursors consists of professional users. The concept of professional users set out in the regulation is rather broad. In contrast to licenced users, professional users may not be only natural persons but also legal persons or public entities (or a group of such persons or entities). They have a demonstrable need for a restricted explosives

⁸² Council Framework Decision, Articles 2(a) and 4(1).

⁸³ Regulation (EU) 2019/816 of the European Parliament and of the Council of 17 April 2019 establishing a centralised system for the identification of Member States holding conviction information on third-country nationals and stateless persons (ECRIS-TCN) to supplement the European Criminal Records Information System and amending Regulation (EU) 2018/1726 [2019] OJ L 135.

⁸⁴ European Commission, European Criminal Records Information System (ECRIS) <https://commission.europa.eu/law/cross-border-cases/judicial-cooperation/tools-judicial-cooperation/european-criminal-records-information-system-ecris_en#exchangeofinformationonmoneunational> accessed 12 August 2025.

⁸⁵ European Union Agency for the Operational Management of Large-Scale IT Systems (eu-LISA), ECRIS-TCN <<https://www.eulisa.europa.eu/Activities/Large-Scale-It-Systems/Ecris-Tcn>> accessed 12 August 2025.

⁸⁶ Explosives Precursors Regulation Article 6(9); Council Framework Decision, Article 8.

⁸⁷ Explosives Precursors Regulation, Article 6(7); Chemicals Act 1996, § 10(10).

precursors for purposes connected with their trade, business, or profession, including agricultural activity.⁸⁸ Unlike members of the general public, who require a licence to acquire restricted explosives precursors in quantities or concentrations above the applicable limit values, professional users do not require a licence; they only need to be able to demonstrate that the acquisition is connected to their professional activities.

For example, professional users in textile wastewater treatment or industrial cleaning have a demonstrable need for hydrogen peroxide (H₂O₂), as it is used to break down organic pollutants, for disinfection, and for bleaching.⁸⁹ Farmers may require products containing ammonium nitrate for use as fertilisers in agriculture, including forestry and horticultural activities. Such agricultural activities may be carried out on either a full-time or part-time basis and are not dependent on the size of the land area on which that agricultural activity is conducted.⁹⁰ For these purposes, ‘agricultural activity’ encompasses the production, rearing, or growing of agricultural products, including harvesting, milking, breeding animals and keeping animals for farming purposes, as well as maintaining agricultural land in good agricultural and environmental condition.⁹¹

In any way, professional users must use the restricted explosives precursors for the purposes of their professional activities, but such purposes do not include making that restricted explosives precursor available to another person.⁹²

C. Supply Chain Security Controls for Restricted Explosives Precursors

Any natural or legal person, public entity (or group thereof) that makes regulated explosives precursors available on the market – either offline or online, including on online marketplaces – constitutes an ‘economic operator’ rather than a ‘professional

⁸⁸ Explosives Precursors Regulation, Article 3(9).

⁸⁹ Lu, Wang, Cui and Zhang, ‘Scalability and Performance of Iron-Carbon Micro-Electrolysis with Hydrogen Peroxide for Textile Wastewater Treatment’ (2025) *Processes* 13 970; Canadian Agency for Drugs and Technologies in Health, *Bleach versus Accelerated Hydrogen Peroxide for C. difficile and Norovirus Disinfection: A Review* (2010) Canadian Electronic Library; Vohra, Altokhais, Bin Thafrah, Alsaif, Alyahya, Alsahhaf, AlFawaz, Aali, Abduljabbar and Aldeeb, ‘Effect of Contemporary Retraction Agents and Cleaning with Hydrogen Peroxide on the Polymerization of Elastomeric Impression Materials’ (2020) *Journal of Applied Biomaterials & Functional Materials* 18 7.

⁹⁰ Explosives Precursors Regulation, Article 3(9).

⁹¹ Explosives Precursors Regulation, Article 3(14).

⁹² Explosives Precursors Regulation, Article 3(9) and Recital 11.

user’ under the Explosives Precursors Regulation.⁹³ This is the sole difference between a ‘professional user’ and an ‘economic operator’.⁹⁴ Therefore, the meaning of ‘economic operator’ under the Explosives Precursors Regulation is much narrower than compared to the Civil Use Explosives Directive. The latter has a wide understanding of ‘economic operator’ including any natural or legal person that uses explosives, which explains why there is no separate definition for ‘professional users’.⁹⁵ ‘Making available’ means any supply, whether in return for payment or free of charge.⁹⁶ The ‘making available’ of restricted explosives precursors to another person is carried out by economic operators, who are required to verify that their prospective customers qualify either as another ‘economic operator’, ‘licenced user’, or as ‘professional user’. Therefore, economic operators are responsible for verifying the status of their prospective customers. The Explosives Precursors Regulation refers to this obligation as the ‘verification upon sale’ under Article 8.

1. Verification Upon Sale of ‘Licenced Users’

Pursuant to Article 8(1) of the Explosives Precursors Regulation, an economic operator making a restricted explosives precursor available to a licenced user must, for each transaction, verify the user’s proof of identity and licence in accordance with the applicable national licencing regime and record the quantity supplied on the licence document.

An actual verification is technically impossible for an economic operator without access to information systems, unlike competent authorities. The economic operator can only request proof of identity (e.g., an ID card) and the licence document to verify their existence but cannot verify their authenticity. The regulation takes this shortcoming into account by referring in Article 8(1) to Article 5(3); this Article requires that economic operators ask members of the general public to present their licence if they intend to acquire restricted explosives precursors beyond the limit values but below the upper limit values. This reference clarifies that ‘verify the proof of identity and licence’ means to ask prospective customers to present their documents that prove their identity and licence but does not involve the verification of those documents.

⁹³ Explosives Precursors Regulation, Article 3(10).

⁹⁴ Explosives Precursors Regulation, Recital 10.

⁹⁵ Civil Use Explosives Directive, Article 2(13).

⁹⁶ Explosives Precursors Regulation, Article 3(4).

2. Verification Upon Sale of ‘Professional Users’

Pursuant to Article 8(2) of the Explosives Precursors Regulation, an economic operator making a restricted explosives precursor available to a professional user, must verify the following for each transaction:

- the proof of identity of the individual entitled to represent the professional user
- the professional user’s trade, business, or profession together with the company name, address and the value added tax (VAT) identification number or any other relevant company registration number, if any (meaning where available)
- the intended use of the restricted explosives precursors by the prospective customer

The economic operator is only exempted from this verification obligation if the verification has occurred within the past year and the transaction is consistent with previous ones.⁹⁷ This is a feasible approach for dealing with regular customers, as repeating the same checks for every transaction would add little additional security value, similar to the exception for the transfer of explosives (see section II/C). Limiting the exemption to verifications carried out within the past year ensures that the information relied upon remains reasonably up to date, while allowing changes such as the cessation of business activity or alterations in professional use to be detected.

With regard to the first requirement, the verification of the individual’s proof of identity, applies to the professional user or his/her representative. This is the same requirement that applies to the verification of licenced users. The economic operator can only require the prospective customer to present an identity document but cannot verify the authenticity of that document.

Considering the other two requirements – verifying the professional activity and the intended use of the restricted explosives precursors – there is an obvious shift of responsibility from the competent authorities to the economic operators. While economic operators can rely on the licence in case of licenced users, they must assess whether the intended use is consistent with the trade, business or profession of the professional user.⁹⁸

⁹⁷ Explosives Precursors Regulation, Article 8(2).

⁹⁸ Explosives Precursors Regulation, Article 8(3).

Pursuant to Annex 4 of the Explosives Precursors Regulation, the economic operators can verify the validity of a VAT identification number through the VAT Information Exchange System (VIES), which is accessible via a website of the European Commission.⁹⁹ Depending on the national rules on data protection, some Member States will also provide the name and address linked to the given VAT identification number as they are recorded in the national databases.

3. Record Keeping

In any case, economic operators are required to retain customer information for licenced and professional users for 18 months from the date of the transaction and to make it available, upon request, to national inspection or law enforcement authorities.¹⁰⁰ This is a much shorter retention period compared to the 10 years for explosives (see section II/C).

4. Reporting of Suspicious Transactions

Economic operators are required to report suspicious transactions for the purpose of preventing and detecting the illicit manufacture of explosives. Therefore, they are obliged to consider all the circumstances and, in particular, if the prospective customer acts in one or more of the following ways:

- appears unclear about the intended use of the regulated explosives precursors
- appears unfamiliar with the intended use of the regulated explosives precursors or is unable to plausibly explain it
- intends to purchase regulated explosives precursors in quantities, combinations, or concentrations that are uncommon for legitimate use
- is unwilling to provide proof of identity, place of residence, or, where appropriate, status as a professional user or economic operator
- insists on using unusual methods of payment, including large amounts of cash¹⁰¹

Economic operators may refuse the suspicious transaction, provided they won't endanger themselves in doing so. Regardless, they have to report the suspicious transaction or attempted suspicious transaction within 24 hours of considering that it is suspicious. When reporting such transactions, they shall give the identity of the

⁹⁹ European Commission, VIES VAT number validation <https://ec.europa.eu/taxation_customs/vies/#/vat-validation> accessed 27 December 2025.

¹⁰⁰ Explosives Precursors Regulation, Article 8(4).

¹⁰¹ Explosives Precursors Regulation, Article 9(1).

customer if possible and all the details which have led them to consider the transaction to be suspicious to the national contact point of the Member State where the suspicious transaction was concluded or attempted.¹⁰²

In Austria, the contact point is established in the Federal Criminal Police Office Act (“*Bundeskriminalamt-Gesetz*”),¹⁰³ which empowers the criminal police to receive and investigate suspicious transactions and reflects a shift from administrative and chemical law towards security and police law. This shift is justified, as suspicious transactions involving regulated explosives precursors give rise to suspicion of the illicit manufacture of explosives. As mentioned above (section II/B), the manufacture of explosives without a licence is illegal under § 13 and prosecuted under § 43 of the Austrian Explosives Act, in line with Article 16 of the Civil Use Explosives Directive. Explosives are regulated within the framework of police and security law in Austria, as explosives legislation falls within the competence of the security authorities (“*Sicherheitsbehörden*”).¹⁰⁴

D. Exploiting Professional User Status

While the Explosives Precursors Regulation provides solid security controls within the supply chain from verification upon sale, record keeping of the customer information and the reporting of suspicious transactions, this section identifies two key weaknesses that facilitate the exploitation of professional user status. First, low entry requirements for obtaining professional user status allow perpetrators to become genuine professional users and consequently to lawfully acquire restricted explosives precursors and eventually misuse them. Second, the limited verifiability of the information provided by prospective customers enables perpetrators to impersonate professional users without any actual registration or formal status.

1. Exploiting Low Entry Requirements

The requirements for obtaining professional user status are comparatively low when measured against the requirements for obtaining licenced user status. The application for a licence is tailored to the acquisition of restricted explosives precursors and therefore requires the submission of extensive information verified by the competent

¹⁰² Explosives Precursors Regulation, Article 9(4).

¹⁰³ § 4(2)(4) BKA-G (Federal Criminal Police Office Act) as amended by Passgesetz-Novelle 2021, Austrian Federal OJ I 2021/123; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

¹⁰⁴ § 2 SPG as amended by federal law, Austrian Federal OJ I 2025/54; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title.

authority (including an expert opinion in Austria, see section III/B/1). In contrast, the ways to obtaining professional user status vary widely and are not regulated under the current legal framework (see section III/B/2). A professional user may be a company or a self-employed individual, as the legal form of the professional activity does not matter. While some professional activities are heavily regulated and require proof of specific qualifications, others are open to anyone. As a result, the professional user category may be exploited by perpetrators seeking to mask illicit acquisitions.

The only limitation imposed by the applicable legal framework is that professional users must have a demonstrable need for a restricted explosives precursor for purposes connected with their trade, business, or profession, including agricultural activity.¹⁰⁵ Consequently, any trade, business, or profession may be eligible for the acquisition of restricted explosives precursors as long as the need for them can be plausibly demonstrated at the verification upon sale (see section III/C/2). The attempted acquisition will only raise a security concern if the demonstrated need for restricted explosives precursors in relation to the professional activity does not convince the economic operator (see section III/C/4). Accordingly, perpetrators cannot arbitrarily rely on any professional activity to disguise acquisitions intended for the illicit manufacture of explosives but must instead rely on a professional activity capable of plausibly demonstrating a legitimate professional use for a restricted explosives precursor. The choice of professional activity used as a disguise will depend on the specific restricted explosives precursor required for the manufacture of a particular explosive. Once such an activity has been identified, the option involving the fewest regulatory requirements is likely to be pursued.

In Austria, so-called *free trades* (“freie Gewerbe”) constitute one such option. A ‘free trade’ is a commercial activity that does not require specific professional qualifications as opposed to regulated trades (“reglementierte Gewerbe”), such as a master craftsman’s certificate or specialised training. A free trade may be pursued following simple registration with the competent trade authority, provided that the general legal requirements are met. The latter require full legal age,¹⁰⁶ EU citizenship or a valid residence permit,¹⁰⁷ and the absence of convictions for specific, primarily financial

¹⁰⁵ Explosives Precursors Regulation, Article 3(9).

¹⁰⁶ § 8 GewO (Trade Regulation Act) as amended by federal law, Austrian Federal OJ I 2025/89; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

¹⁰⁷ Trade Regulation Act, § 14.

offences that have not yet been expunged.¹⁰⁸ Some Austrian free trades combine low regulatory entry thresholds with sufficiently broad activity descriptions to plausibly justify the acquisition of restricted explosives precursors. For example, the free trade of agricultural services ('Agrarservice')¹⁰⁹ would allow to justify the acquisition of ammonium nitrate (AN) for the purposes of contractual agricultural and forestry services, including fertiliser spreading and land management. Cleaning tanks and boilers ('Reinigung von Tanks und Kesseln')¹¹⁰ would allow to plausibly explain the use of strong oxidisers, such as hydrogen peroxide (H₂O₂) and acids, such as nitric acid (HNO₃), for descaling or cleaning. This is due to the fact that this free trade is a vague industrial cleaning activity with a wide discretion in chemical choice. Likewise, sewer cleaning ('Kanalräumung')¹¹¹ would allow to plausibly demonstrate the need for acids for pipe cleaning and maintenance, such as sulphuric acid (H₂SO₄). The collection and treatment of wastewater and waste ('Sammeln und Behandeln von Abwässern und Abfällen')¹¹² would allow wide chemical use claims, including hydrogen peroxide (H₂O₂) for wastewater treatment.

These examples illustrate plausible demonstrable needs for a restricted explosives precursor for purposes connected with certain trades, businesses, or professions. They show that the low entry threshold of free trades allows professional user status to be claimed without prior relevant authority involvement. It should be emphasised that the performance of free trades is not subject to any qualification requirements and, moreover, does not entail any reliability assessment. The reliability of the natural person is verified only for certain regulated trades, such as master builders, well constructors, chemical laboratories, pyrotechnics companies, private investigators, or security service providers.¹¹³ As a result, free trades are particularly prone to exploitation by perpetrators seeking to conceal illicit acquisitions behind professional user status.

¹⁰⁸ Trade Regulation Act, § 13.

¹⁰⁹ Bundesministerium für Arbeit und Wirtschaft, *Bundeseinheitliche Liste der freien Gewerbe* (22 August 2024) 3.

¹¹⁰ Bundesministerium für Arbeit und Wirtschaft, *Bundeseinheitliche Liste der freien Gewerbe* (22 August 2024) 24.

¹¹¹ Bundesministerium für Arbeit und Wirtschaft, *Bundeseinheitliche Liste der freien Gewerbe* (22 August 2024) 20.

¹¹² Bundesministerium für Arbeit und Wirtschaft, *Bundeseinheitliche Liste der freien Gewerbe* (22 August 2024) 24.

¹¹³ Trade Regulation Act, § 95.

2. Exploiting Limited Verifiability of Provided Information

An additional risk arises from the possibility that perpetrators may omit registration entirely and instead impersonate professional users in order to acquire restricted explosives precursors, rather than becoming genuine professional users. Posing as a professional user is more attractive than posing as a licenced user for two reasons. First, it allows access to all restricted explosives precursors, rather than being limited to the small number of substances eligible for licencing. Second, while posing as a licenced user requires the presentation of a formally issued licence that can be verified by the economic operator, professional user status is established primarily through the plausibility of the asserted professional context, making it considerably easier to impersonate. To comply with the verification upon sale requirement (see section III/C/2), the economic operator needs to request information about ‘the trade, business, or profession together with the company name, address and the value added tax identification number or any other relevant company registration number, if any, of the prospective customer.’ In Austria, a natural person with an annual turnover of less than 700.000 Euro is not obliged to register in the company register and therefore does not need a company name.¹¹⁴ Moreover, not every business in Austria requires a VAT number, as small business owners are exempted from value added tax.¹¹⁵ The Explosives Precursors Regulation even considers the circumstance that the prospective customer is not necessarily in the position to provide a company registration number (argumentum ‘if any’), which means that such numbers only need to be provided if available.¹¹⁶

These examples demonstrate how limited the information is that a professional user may be required to provide to an economic operator during the verification upon sale. As a result, an imposter may construct a credible pretence by invoking reasons for not providing a company name or company registration number, while supplying only a company address and general information about the asserted professional activity. Under this *modus operandi*, the perpetrator may also appear credible by relying on relevant free trades (see section III/D/1) to plausibly justify the intended professional use of restricted explosives precursors, with the crucial difference that

¹¹⁴ § 8(1) in connection with § 189 UGB (Austrian Commercial Code) as amended by GenRÄG 2024, Austrian Federal OJ I 2024/133; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

¹¹⁵ If their annual turnover did not exceed in the previous calendar year and does not exceed 55.000 Euro in the current year, see § 6(1)(27) UStG 1994 (Austrian Value Added Tax Act) as amended by BBKG 2025 Teil Steuern, Austrian Federal OJ I 2025/98; all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

¹¹⁶ Explosives Precursors Regulation, Article 8(2)(b).

no registration has taken place at all. The address provided may correspond to a legitimate business address associated with an existing company, or it may be entirely fictitious. In addition, the verification upon sale also requires proof of identity of the individual purporting to represent the professional user. Where the business address provided is associated with an existing but unrelated company, such representation would necessarily be false. Where the address consists only of a postbox or a similarly opaque arrangement, the presentation of a genuine identity document remains possible. However, given the overall *modus operandi* described above, the authenticity of the identity document presented may be difficult to assess in practice.

Economic operators are required to have appropriate, reasonable, and proportionate procedures in place to detect suspicious transactions, adapted to the specific environment in which they make regulated explosives precursors available.¹¹⁷ They nevertheless face structural constraints that limit their ability – unlike competent authorities – to carry out comprehensive verification of identity, professional status, and supporting information. Moreover, the economic operator must assess the provided information and has to decide about the transaction on spot, while interacting with the prospective customer. In comparison, the competent authority can deliberate and reach a decision in an unpressured environment. In Austria, the competent authority is the respective district administrative authority, which can decide within six months.¹¹⁸

IV. Conclusion

The review of the governance frameworks for explosives and explosive precursors reveals that the prerequisites for acquiring restricted explosive precursors are imbalanced in two respects, both relating to professional user status under the Explosives Precursors Regulation. First, the Civil Use Explosives Directive establishes robust controls across the entire supply chain, providing a clear benchmark for the governance of high-risk substances. In contrast, professional users under the Explosives Precursors Regulation may acquire substances with comparable hazardous potential subject to significantly fewer requirements. Second, the Explosives Precursors Regulation differentiates between licenced users and professional users in a way that makes professional user status prone to exploitation.

¹¹⁷ Explosives Precursors Regulation, Article 9(2).

¹¹⁸ § 73(1) AVG 1991 (Austrian General Administrative Procedure Act) as amended by federal law, Austrian Federal OJ I 2025/50 (Informationsfreiheits-Anpassungsgesetz); all Austrian federal statutes can be accessed via <https://www.ris.bka.gv.at/Bund/> with their title, amendments can be found by their OJ number.

The analysis of the Civil Use Explosives Directive showed that the acquisition of explosives always requires a licence, respective qualifications and the demonstration of a legitimate interest in carrying out professional blasting activities. The tracking of explosives and the licence regime makes it difficult for perpetrators to acquire explosives without a licence. Consequently, perpetrators tend to manufacture explosives themselves, which is – without a licence – illegal as well. To manufacture explosives, perpetrators rely on explosives precursors, which are substances that have legitimate, everyday uses in industries like agriculture, construction, or medicine. Their occurrence in everyday consumer goods makes them more difficult to regulate than explosives. Primarily, explosives precursors are governed by chemicals law, but because of their dual use, they also fall under the domain of security and police law.

The analysis of the Explosives Precursors Regulation reveals that the acquisition of restricted explosives precursors requires a licence only for members of the general public, whereas professional users are not subject to a licencing requirement when acquiring restricted explosives precursors. Both professional users and licenced users are entitled to acquire restricted explosives precursors, but the latter only to a limited extent, depending on a licence regime in place and the upper limits of the restricted explosives precursors. The licencing regimes for explosives and restricted explosives precursors involve the competent authorities in each transfer, except where the risk is considered low, such as in the case of subsequent regular transfers that do not deviate from the results of the most recent verification of the relevant circumstances. The licence regimes follow a *proactive regulatory approach* by the competent authorities to ensure the legitimacy of the intended use ex ante. This framework enables the competent authorities to verify all required information concerning the actors involved before a transfer takes place.

In contrast, transactions involving restricted explosives precursors between economic operators and professional users do not involve the competent authorities, reflecting a *reactive regulatory approach*. Instead, competent authorities only engage ex post, as the ultimate responsibility rests with the economic operator, who must ensure the legitimacy of the intended use and verify the required information. Customer information must be retained in all cases, and suspicious acquisitions or attempts thereof must be reported to the authorities. Such a reactive regulatory approach may be justified where acquisitions involve a lower level of risk. However, professional users are permitted to acquire all restricted explosives precursors, whereas licenced users may acquire only certain restricted explosives precursors. Substances considered to pose a non-acceptable risk for members of the public are not eligible for licencing and are therefore unavailable to licenced users at all. As a result, the

framework for professional users is less restrictive than for licenced users and may allow regulatory gaps to be exploited.

The analysis of the Explosives Precursors Regulation identified two possible routes of exploitation. First, based on the free trades listed in the Austrian harmonized list of free trades (“Bundeseinheitliche Liste der freien Gewerbe”) it was illustrated that perpetrators can become relatively easy professional users that provide a plausible professional context for the acquisition of restricted explosives precursors, including agricultural services, industrial cleaning, and waste or wastewater treatment. The low entry requirements to become a professional user allow perpetrators to pursue professional activities as a proxy to acquire restricted explosives precursors for illegal purposes. Second, professional users are not required to provide as much information to economic operators as licenced users to competent authorities, and their verification is left to economic operators at the time of acquisition, who lack the necessary resources to validate the authenticity of the provided information. Therefore, imitating a professional user provides a more feasible route to acquiring restricted explosives precursors than presenting a forged licence that can be easily verified by contacting the competent authorities that issued the licence. In contrast, the process of obtaining a licence is tightly regulated; the licence is designated for a specific purpose and all information is verified before the time of acquisition of explosives precursors by the competent authorities. Obviously applying for a licence entails the provision of more comprehensive information than what is required of a professional user when interacting with an economic operator. The authorities have sufficient time to thoroughly scrutinize this information as part of their evaluation process. For these reasons, the provisions governing the verification upon sale are unbalanced and undermine the purposes of the licencing regime under the Explosives Precursors Regulation.

Given these two possibilities of exploitation, the reactive regulatory approach does not withstand scrutiny from a regulatory security perspective. The analysis demonstrated that the level of security applied to professional users under the Explosives Precursors Regulation is lower than that applied to licenced users under the same regulation. Moreover, this imbalance cannot be justified, as professional users are eligible to acquire a broader range of – and in some cases more hazardous – restricted explosives precursors than licenced users. Considering the severe harm that restricted explosives precursors may entail, either directly or through conversion into explosives, it is reasonable to call for a regulatory approach that treats professional users under the Explosives Precursors Regulation more closely in line with professional users governed by the Civil Use Explosives Directive. Such an approach would entail a shift towards a proactive regulatory model, requiring

professional users to obtain prior authorisation from the competent authorities for the acquisition of restricted explosives precursors. Not only would this lead to a more balanced allocation of responsibility between economic operators and competent authorities, but it would also recalibrate the regulatory balance without undermining legitimate professional activity. This ex ante involvement should not require the same scrutiny as for members of the public but should nevertheless enable prior verification of professional users from both a chemical law and security law perspective – an assessment that can currently be circumvented under the existing legal framework.

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